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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/757,553

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Atsushi Yoshida

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02/06/2006

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EXAMINER

GOLDBERG, BRIAN J

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/757,553

Applicant(s)

YOSHIDA, ATSUSHI

Examiner

Brian Goldberg

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 10-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/7/2005.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Inten et al. (US 6224187).
4. Regarding claim 1, Inten et al. disclose "a cap moving mechanism for moving a cap (31 of Fig 4) for sealing a liquid ejecting head (2 of Fig 1) for ejecting liquid to a target, comprising: a pushing-up part for moving said cap upwards or downwards by rotating (4122, 4123 of Fig 8 and col 11 ln 56-67); a cam shaft (412 of Fig 8) provided integrally with said pushing-up part as a rotating shaft of said pushing-up part; a cam shaft gear (4121 of Fig 8) comprising a drive region (see the region marked as 4121 of Fig 8), which rotates integrally with said cam shaft taken as a rotating shaft, whereby a driving force of a motor (5 of Fig 8) for driving said cam shaft is transmitted, and a non-drive region whereby said driving force of said motor is not transmitted (toothless region of 4121 shown in Fig 8); and a driving force transmission gear (41 of Fig 8) for

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transmitting said driving force of said motor to said cam shaft gear in order that said cap can be moved downwards from a state in which said cap has been completely moved upwards, after said motor rotates by a predetermined amount from when said cap has been completely moved upwards, and transmitting said driving force of said motor to said cam shaft gear in order that said cap can be moved upwards from a state in which said cap has been completely moved downwards, after said motor rotates by a predetermined amount from when said cap has been completely moved downwards (col 11 ln 56-67, col 12 ln 32-37, ln 43-47)."

5. Regarding claim 2, Inten et al. disclose "a toothed gear (4124 of Fig 8) comprising a drive region whereby said driving force of said motor is transmitted and a non-drive region whereby said driving force of said motor is not transmitted (see toothed and toothless regions of 4124 in Fig 9); a spur gear (4121 of Fig 8) being in contact with said toothed gear; and an energizing part (4142 of Fig 8) for transmitting a rotating force of said spur gear to said toothed gear, and said spur gear rotates freely against said cam shaft taken as a center axis, said spur gear receiving said driving force of said motor, said spur gear energized by said energizing part towards said toothed gear, said toothed gear thereby being rotated accompanying said spur gear (col 10 ln 45-52, col 11 ln 56-60)."

6. Regarding claim 3, Inten et al. disclose "wherein said toothed gear (4124 of Fig 8) can rotate freely against said cam shaft (412 of Fig 8) taken as a center axis by a predetermined rotation angle (col 10 ln 50-52, col 11 ln 36-40)."

7. Regarding claim 4, Inten et al. disclose "wherein said drive region of said toothed gear is arranged in at least a part of an angle area in which said non-drive region of said cam shaft gear is arranged with regard to said cam shaft (see Fig 8 in which drive or toothed region of 4124 is in part of an angle area of 4121 that is non-drive or toothless)."

8. Regarding claim 5, Inten et al. disclose "wherein said toothed gear further comprises two of said non-drive regions between which said drive region is held (see Fig 9 in which two non-drive or toothless regions are shown between which is drive region 41241 of gear 4124)."

9. Regarding claim 8, Inten et al. disclose "wherein said pushing-up part is cam-shaped (4122, 4123 of Fig 8)."

10. Regarding claim 9, Inten et al. disclose "a liquid ejecting head (2 of Fig 1) for ejecting liquid to said target; a cap (31 of Fig 4) for sealing said liquid ejecting head; a pushing-up part for moving said cap upwards or downwards by rotating (4122, 4123 of Fig 8 and col 11 ln 56-67); a cam shaft (412 of Fig 8) provided integrally with said pushing-up part as a rotating shaft of said pushing-up part; a cam shaft gear (4121 of Fig 8) comprising a drive region(see the region marked as 4121 of Fig 8), which rotates integrally with said cam shaft taken as a rotating shaft, whereby a driving force of a motor (5 of Fig 8) for driving said cam shaft is transmitted, and a non-drive region whereby said driving force of said motor is not transmitted (toothless region of 4121 shown in Fig 8); and a driving force transmission gear (41 of Fig 8) for transmitting said driving force of said motor to said cam shaft gear in order that said cap can be moved downwards from a state in which said cap has been completely moved upwards, after

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said motor rotates by a predetermined amount from when said cap has been completely moved upwards, and transmitting said driving force of said motor to said cam shaft gear in order that said cap can be moved upwards from a state in which said cap has been completely moved downwards, after said motor rotates by a predetermined amount from when said cap has been completely moved downwards (col 11 ln 56-67, col 12 ln 32-37, ln 43-47)."

11. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Gaardner (US 6270183).

12. Regarding claim 1, Gaardner discloses "a cap moving mechanism for moving a cap (29 of Fig 2A) for sealing a liquid ejecting head (22, 24, 26 of Fig 3) for ejecting liquid to a target, comprising: a pushing-up part for moving said cap upwards or downwards by rotating (49 of Fig 7 and col 10 ln 24-26); a cam shaft (46 of Fig 3) provided integrally with said pushing-up part as a rotating shaft of said pushing-up part; a cam shaft gear (45 of Fig 3) comprising a drive region (see the region marked as 45 of Fig 6), which rotates integrally with said cam shaft taken as a rotating shaft, whereby a driving force of a motor (41 of Fig 3) for driving said cam shaft is transmitted, and a non-drive region whereby said driving force of said motor is not transmitted (toothless region of 45 shown in Fig 6); and a driving force transmission gear (43, 45, 48 of Fig 3) for transmitting said driving force of said motor to said cam shaft gear in order that said cap can be moved downwards from a state in which said cap has been completely moved upwards, after said motor rotates by a predetermined amount from when said cap has been completely moved upwards, and transmitting said driving force of said motor to

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said cam shaft gear in order that said cap can be moved upwards from a state in which said cap has been completely moved downwards, after said motor rotates by a predetermined amount from when said cap has been completely moved downwards (col 9 ln 7-10, ln 58-63, col 10 ln 22-26)."

13. Regarding claim 9, Gaardner discloses "a liquid ejecting head (22, 24, 26 of Fig 3) for ejecting liquid to said target; a cap (29 of Fig 2A) for sealing said liquid ejecting head; a pushing-up part for moving said cap upwards or downwards by rotating (49 of Fig 7 and col 10 ln 24-26); a cam shaft (46 of Fig 3) provided integrally with said pushing-up part as a rotating shaft of said pushing-up part; a cam shaft gear (45 of Fig 3) comprising a drive region (see the region marked as 45 of Fig 6), which rotates integrally with said cam shaft taken as a rotating shaft, whereby a driving force of a motor (41 of Fig 3) for driving said cam shaft is transmitted, and a non-drive region whereby said driving force of said motor is not transmitted (toothless region of 45 shown in Fig 6); and a driving force transmission gear (43, 45, 48 of Fig 3) for transmitting said driving force of said motor to said cam shaft gear in order that said cap can be moved downwards from a state in which said cap has been completely moved upwards, after said motor rotates by a predetermined amount from when said cap has been completely moved upwards, and transmitting said driving force of said motor to said cam shaft gear in order that said cap can be moved upwards from a state in which said cap has been completely moved downwards, after said motor rotates by a predetermined amount from when said cap has been completely moved downwards (col 9 ln 7-10, ln 58-63, col 10 ln 22-26)."

Allowable Subject Matter

14. Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter:

16. The prior art does not disclose or suggest said toothed gear being arranged between said cam shaft gear and said spur gear in combination with the remaining claim elements as set forth in claim 6.

17. The prior art does not disclose or suggest said cam shaft gear, said toothed gear, said spur gear and said energizing part being arranged between at least two pushing-up parts with the remaining claim elements as set forth in claim 7.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Goldberg whose telephone number is 571-272-2728. The examiner can normally be reached on Monday through Friday, 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Talbott can be reached on 571-272-1934. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BJG



January 30, 2006

Thinh Nguyen
Primary Examiner
Technology Center 2800